In the Claims:

Claim 1 (currently amended):

1. An information hiding method with reduced fuzziness, which comprises the steps of:

inputting the information to be embedded into a convolutional encoder and generating encoded information whose length is a multiple of the original information;

generating a random number sequence using interleaving encoding for permuting the encoded information, the seed of the random numbers being a first key;

selecting a pixel of a host image using a random number generator as an information embedding point of the encoded information, the seed of the random number generator being a second key, and

embedding the encoded information into a B channel of the pixel of the host image;

further wherein the host image H is an image of m×n pixels and the electronic signature to be embedded is information W with a size L, both the host image H and the embedded information W being expressed as:

$H=\{h_{ij} \mid 0 \le i \le m, 0 \le j \le n, h_{ij} \in [0,255]\}$, and

$W=\{w_i \mid 0 \le i \le L, w_i \in [0,1]\}$; and

a set $ASET_{ij}=\{h_{i+1,j}, h_{i-1,i+1}, h_{i,j+1}, h_{i+1,j+1}\}$ being defined for four pixels surrounding and to the right of any pixel h_{ij} in the host image.

Claim 2 (currently amended):

2. The method according to claim 1, wherein the convolutional encoding corrects transmission errors or human damages on the encoded information.

Claim 3 (original):

3. The method according to claim 1, wherein the random number sequence is generated by a linear feedback shift register.

Claim 4 (original):

4. The method according to claim 3, wherein the linear feedback shift register comprises a plurality of buffers.

Claim 5 (previously amended):

5. The method according to claim 1 further comprising the following steps for extracting the embedded information:

using the second key to compute the embedding positions of the encoded information;

using the first key to reconstruct the encoded information and to restore the order before interleaving encoding; and

decoding the encoded information using convolutional decoding.

Claim 6 (withdrawn):

6.

Claim 7 (currently amended):

7. The method according to claim 6 1, wherein a temporary variable is defined to be $h'=(h_{i-1,j-1}+h_{i,j-1}+h_{i-1,j+1}+h_{i-1,j}+h_{i+1,j}+h_{i,j+1}+h_{i,j+1}+h_{i+1,j+1})/8$.

Claim 8 (withdrawn):

8.

Claim 9 (original):

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9. The method according to claim 5, wherein the hidden information is true if h□k_{ij} in the step of using the second key to compute the embedding positions of the encoded information.

Claim 10 (previously amended):

10. The method according to claim 5, wherein the convolutional decoding adopts the Viterbi algorithm.

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